

REMARKS

Claims 11 and 19-31 are pending in this application. By this Amendment, claim 11 is amended and claims 13 and 33 are canceled. Support for the amendment to claim 11 may be found, for example, in the specification at page 8, lines 18-27, and canceled claim 13. No new matter is added. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

I. Rejection Under 35 U.S.C. §112, First Paragraph

The Office Action rejects claims 11-14 and 19-34 under 35 U.S.C. §112, first paragraph, for failing to comply with the written description requirement. Claims 12, 14, 32 and 34 were canceled in the Amendment filed August 7, 2007 rendering their rejection moot, and by this Amendment, claims 13 and 33 are canceled, rendering their rejection moot. As to the remaining claims, Applicant respectfully traverses the rejection.

In maintaining this rejection, the Office Action fails to reply to the arguments presented by the Applicant in the Amendment filed August 7, 2007. However, MPEP §2163.04(II) states:

Upon reply by applicant, before repeating any rejection under 35 U.S.C. 112, para. 1, for lack of written description, review the basis for the rejection in view of the record as a whole, including amendments, arguments, and any evidence submitted by applicant. If the whole record now demonstrates that the written description requirement is satisfied, do not repeat the rejection in the next Office action. If the record still does not demonstrate that the written description is adequate to support the claim(s), repeat the rejection under 35 U.S.C. 112, para. 1, fully respond to applicant's rebuttal arguments, and properly treat any further showings submitted by applicant in the reply. When a rejection is maintained, any affidavits relevant to the 35 U.S.C. 112, para. 1, written description requirement, must be thoroughly analyzed and discussed in the next Office action. See *In re Alton*, 76 F.3d 1168, 1176, 37 USPQ2d 1578, 1584 (Fed. Cir. 1996).

(emphasis added). Applicants respectfully submit that the Office Action is incomplete and, thus, the Office Action should be withdrawn in favor of an Office Action in which each of the Applicant's rebuttal arguments is responded to. For convenience, Applicant's arguments previously made of record are reproduced below.

A. Previous Arguments

To provide written description for a claim, the specification as originally filed must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, the inventors were in possession of the invention as claimed. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991); MPEP §2163(1).

Claim 11 is directed to a wafer-holding carrier wherein "the total area of the polishing agent-passing holes occupies more than 20% and 30% or less of a main surface of the carrier." The lower limit of "more than 20%" is within the range of "15% or more" and "30% or less" disclosed in the specification. See specification, pages 4 and 5. Such a disclosure would clearly be considered by persons skilled in the art to be part of the Applicant's invention. Moreover, Examples 1 and 2 and Comparative Examples 1 and 2 demonstrate that as for the occupied area ratio of the polishing agent-passing holes, the greater, the better (up to 30%). See specification pages 14-16. In Example 2, when the occupied area ratio of polishing agent-passing holes was made to be 28.6%, flatness could be further improved as compared with Comparative Examples 1 and 2 in which each ratio was less than 15%, and Example 1 in which the ratio was less than 20%. From this data, persons skilled in the art would clearly consider the range of "more than 20% and 30% or less" to be fully supported by the written description.

In addition to these facts, the case law overwhelmingly supports the Applicant's compliance with the written description requirement. See, e.g., *In re Blaser, Germscheid and Worms*, 194 USPQ 122, 125 (CCPA 1977) (a disclosed 25-60% range supports claimed

35-60% range); *In re Wertheim*, 191 USPQ 90, 98 (CCPA 1976) (a disclosed 25-60% range with specific embodiments at 36% and 50% supports claimed 35-60% range). Furthermore, public policy does not support the current reasoning asserted in the Office Action:

If, when [applicants] yield any part of what they originally believed to be their due, they substitute a new "invention," only two courses will open to them: they must at the outset either prophetically divine what the art contains, or they must lay down a barrage of claims, starting with the widest and proceeding by the successive incorporation of more and more detail, until all combinations have been exhausted which can by any possibility succeed. The first is an impossible task; the second is a custom already honored in the breach than in the observance, and its extension would only increase that surfeit of verbiage which has for long been the curse of patent practice, and has done much to discredit it. *It is impossible to imagine any public purpose which it could serve.*

(Emphasis added). See *Engineering Development Laboratories v. Radio Corp. of America*, 68 USPQ 238, 241-242 (2d Cir. 1946) (quoted with approval in *In re Driscoll*, 195 USPQ 434, 438 (CCPA 1977)).

Moreover, the burden of presenting evidence of failure to comply with the written description has not been met. A description as filed is presumed to be adequate, unless or until sufficient evidence or reasoning to the contrary has been presented by the Examiner to rebut the presumption. See, e.g., *In re Marzocchi*, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971). The Examiner, therefore, must have a reasonable basis to challenge the adequacy of the written description. Specifically, the Examiner has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in the specification a description of the invention defined by the claims. *In re Wertheim*, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976). The Office Action simply states that "'more than 20%' as a lower limit of acceptable hole size, is deemed to constitute new matter." No evidence has been presented and, as such, the required burden has not have been met.

B. Additional Arguments

The Office Action states, "The claimed limitation of 'more than 20%' as a lower limit of acceptable hole size, is deemed to constitute new matter. Applicant's specification clearly allows for hole sizes smaller than this recited lower starting limit." See Office Action, page 2, item 2.

Applicant respectfully requests clarification as to the relevance of the fact that the specification allows for hole sizes smaller than the recited lower limit. The question here should be whether the disclosure conveys to one of ordinary skill in the art that the inventor was in possession of the recited range of "more than 20% and 30% or less" at the time of invention. It is unclear how other disclosed but non-recited ranges or limitations factors into the analysis.

As stated above, when a disclosure describes a claimed invention in a manner that permits one skilled in the art to reasonably conclude that the inventor possesses the claimed invention, the written description requirement is satisfied. See MPEP §2163(I). This possession may be shown by any number of ways and the Applicant need not describe every claim feature exactly because there is no *in haec verba* requirement. See MPEP §2163(I)(b). Rather, to satisfy the written description requirement, all that is needed is "reasonable clarity." See MPEP §2163.02. Also, an adequate description may be made in any way through express, implicit, or even inherent disclosures in the application, including words, structures, figures, diagrams, and/or formulae. See MPEP §§2163(I), 2163.02. Finally, it is important to be mindful of the generally inverse correlation between the level of skill and knowledge in the art and the specificity of disclosure necessary to satisfy the written description requirement. See MPEP §2163(II)(A)(2).

Discussed above is the fact that Example 2 discloses a wafer carrier in accordance with claim 1, wherein the total area of the polishing agent-passing holes occupies 28.6% of a

main surface of the carrier. The carrier of Example 2 has a diameter of 1190 mm with 540 through-holes having a diameter of 26 mm, and one hole in the center of the carrier having a diameter of 200 mm. See specification at page 28, lines 7–19.

However, Applicant previously failed to mention that the specification provides disclosure of another wafer carrier that meets the requirements of claim 1:

[I]f a carrier has a diameter of about 1190 mm as described above, the occupied area of polishing agent-passing holes can be controlled to be 30% or less even when the carrier is provided with one hole having a diameter of 200 mm in the center of the carrier and 520 holes having a diameter of about 27 mm.

See specification, page 18, lines 19–25. The occupied area of polishing agent-passing holes of this embodiment is 29.6%.

Below is a table showing four specific embodiments discussed in the specification:

	Carrier Diameter	Through-Holes Diameter	Number of Through-Holes	Center Hole Diameter	Total Area of Polishing Agent-Passing Holes
A ¹	1190	18 mm	540	200 mm	15.2%
B ²	1190	20 mm	510	200 mm	17.2%
C ³	1190	26 mm	540	200 mm	28.6%
D ⁴	1190	27 mm	520	200 mm	29.6%

As can be seen, each of the four carriers has the same carrier diameter and center hole diameter. However, the four embodiments differ in through-hole diameters and the number of through-holes. A and C, however, each have 540 through-holes, but differ in the size of the through holes (A=18 mm, C=26 mm). From just A and C above, one of ordinary skill in the art would recognize that one could simply adjust the diameter of the through-holes anywhere between 18 mm and 26 mm to produce any desired percentage of total area of

¹ See specification, paragraph bridging pages 17 and 18.

² See specification, page 26, lines 7–17 (Example 1).

³ See specification, page 28, lines 7–19 (Example 2).

⁴ See specification, page 18, lines 19–25.

polishing agent-passing holes that is between 15.2% and 28.6%. Therefore, one of ordinary skill in the art would recognize from the specification that the inventor was in possession of the entire range of 15% to 30% and any sub-range encompassed by that range.

Applicant respectfully submits that as demonstrated above, the specification conveys to one of ordinary skill in the art that the inventor was in possession of the recited range of "more than 20% and 30% or less" at the time of invention. Thus, reconsideration and withdrawal of the rejection are respectfully requested.

II. Rejection Under 35 U.S.C. §102(b)

The Office Action rejects claims 11, 12, 19, 23, 27, 31, and 32 under 35 U.S.C. §102(b) as being anticipated by JP 10-180623 to Susumu et al. ("Susumu"). Claims 12 and 32 were canceled in the Amendment filed August 7, 2007, rendering their rejection moot. As to the remaining claims, Applicant respectfully traverses the rejection.

Without conceding the propriety of the rejection, claim 11 is amended to incorporate the subject matter of non-rejected claim 13. Therefore, Susumu does not anticipate claim 11. Claims 19, 23, 27 and 31 variously depend from claim 11 and, thus, also are not anticipated by Susumu. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

III. Rejections Under 35 U.S.C. §103(a)

The Office Action rejects claims 11-14, 19, 21, 23, 25, 27, 29 and 31-34 under 35 U.S.C. §103(a) as obvious over Susumu; and rejects claims 20, 22, 24, 26, 28 and 30 as obvious over Susumu in view of JP 10-202511 to Fuminari et al. ("Fuminari"). Claims 12, 14, 32 and 34 were canceled in the Amendment filed August 7, 2007 rendering their rejection moot; and by this Amendment, claims 13 and 33 are canceled rendering their rejection moot. As to the remaining claims, Applicant respectfully traverses the rejection.

In maintaining these rejections, the Office Action fails to reply to the arguments presented by the Applicant in the Amendment filed August 7, 2007. However, MPEP §707.07(f) states:

In order to provide a complete application file history and to enhance the clarity of the prosecution history record, an examiner must provide clear explanations of all actions taken by the examiner during prosecution of an application.

Where the requirements are traversed, or suspension thereof requested, the examiner should make proper reference thereto in his or her action on the amendment.

Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it.

(emphasis added). Applicants respectfully submit that the Office Action is incomplete and, thus, the Office Action should be withdrawn in favor of an Office Action in which each of the Applicant's rebuttal arguments are responded to. For convenience, Applicant's arguments previously made of record are incorporated into the arguments below.

Independent claim 11 is directed to "a wafer-holding carrier which is used when holding wafers between an upper turn table and a lower turn table to which polishing pads are attached, and polishing both sides of the wafers by a polishing agent, wherein the carrier has polishing agent-passing holes for passing the polishing agent through as well as wafer-holding holes for containing and holding the wafers, and the total area of the polishing agent-passing holes occupies more than 20% and 30% or less of a main surface of the carrier" (emphasis added). Susumu does not teach such features.

In contrast to the wafer-holding carrier of claim 11, Susumu is directed to a wafer-holding carrier used in a lapping process, not a wafer holder used in a polishing process, as recited in claim 11. Even if the processes were the same, the ranges of the hole areas in Susumu and claim 11 are different. In Susumu, an area of through holes is set between 0.8%

and 20% of the hole surface area of the carrier, whereas claim 11 recites that the "passing holes occupies more than 20% and 30% or less of a main surface."

Furthermore, Susumu teaches away from the wafer-holding carrier of claim 11. Susumu teaches that area ratios over 20% lower the mechanical strength of the carrier and result in imperfect holes and cracking. The Office Action asserts that Figure 4 of Susumu reveals that hole size ratios greater than 20% were produced and/or conceived. However, Figure 4 of Susumu actually teaches that imperfect holes and cracking increase dramatically when the occupied area of holes is over 20% of the total surface area of a carrier. Therefore, Susumu teaches away from the wafer-holding carrier of claim 11 in which the "polishing agent-passing holes occupies more than 20% and 30% or less of a main surface."

The Office Action also asserts that the Applicant's specification is completely silent as to any criticality of the hole size ratio being "more than 20%," and that it appears from the Applicant's specification that values as low as 15% would work equally well as values somewhat greater than 20%. However, in Example 2, when the occupied area ratio of polishing agent-passing holes was made to be 28.6%, flatness could be further improved as compared with Comparative Examples 1 and 2 in which each ratio was less than 15%, and Example 1 in which the ratio was less than 20%.

Next, Susumu is directed to a wafer carrier for a lapping device, while claim 11 is directed to a wafer-holding carrier for wafer polishing. The two processes are not the same, and are not done for the same purposes. For example, colloidal silica, which is a very fine abrasive material, may be used for polishing silicon wafers. See specification, page 24, lines 2-7. On the other hand, lapping utilizes a much coarser abrasive, such as the artificial emery disclosed in paragraph [0013] of Susumu. Additionally, Susumu discloses that its wafer carrier is made of cast iron (see paragraphs [0014] and [0015]), whereas Example 1 of the Applicant's specification discloses a glass epoxy carrier.

Lastly, by this Amendment, claim 11 is amended to recite "each of the polishing agent-passing holes has a circular shape and a diameter of 5 mm-30 mm." Susumu does not disclose such a feature.

For at least the reasons presented above, Susumu fails to teach or suggest all of the features of independent claim 11 and, thus, would not have rendered obvious claim 11. Despite its asserted disclosures, Fuminari fails to cure the deficiencies of Susumu with respect to claim 11. Therefore, Susumu and Fuminari, either separately or combined, fail to teach or suggest all of the features of claim 11.

Claim 11 would not have been obvious by Susumu and Fuminari. Claims 19-31 variously depend from claim 11 and, thus, also would not have been rendered obvious by Susumu and Fuminari. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

IV. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachments:

Petition for Extension of Time
Request for Continued Examination

Date: March 27, 2008

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